

What is claimed is:

- 1) In a business intelligence system, a method of providing a drill-through service between two or more drill-through objects, the objects being drill-through sources and targets, the method comprising steps of:
  - 5 a) defining one or more drill-through paths between drill-through objects, the drill-through path definitions being collected in a single structure;
  - b) interfacing to the drill-through objects in a run-time environment using the collection of drill-through path definitions; and
  - 10 c) administering and maintaining the drill-through path definitions, independently of applications using them.
- 2) The method of claim 1 wherein the drill-through objects include data collections that are derived from different applications.
- 3) The method of claim 2 wherein the definitions of paths are collected in a group of related structures.
- 15 4) The method of claim 3 wherein the data collection includes data cubes and data-based reports, which are derived from different report generating applications.
- 5) The method of claim 1 wherein the definition of a drill-through path includes metadata.
- 20 6) A database application programming interface (API) for providing a drill-through service between a plurality of drill-through objects, the objects being drill-through sources and targets, the interface comprising:
  - 25 a) means for defining one or more drill-through objects and their associated paths, the definitions of the drill-through paths being collected in a single structure; and
  - b) run-time environment means for interfacing said drill-through paths to the drill-through objects;

wherein the drill-through paths are administered and maintained independently of the applications using them.

- 7) A database application programming interface (API) for providing a drill-through service between a plurality of drill-through objects (drill-through sources and targets), the interface comprising:

- a) means for defining one or more drill-through paths, the definitions of the drill-through paths being collected at a single place; and
- b) run-time environment means for interfacing said drill-through paths to the

- 10 wherein the drill-through path definitions are administered and maintained independently of the applications using them.

8) The database application programming interface of claim 7, wherein the drill-through objects includes data collections that are derived from different applications.

- 15 9) The application programming interface of claim 7, wherein the definitions of paths are collected in a group of related structures.

10) The database application programming interface of claim 8, wherein the data collection includes data cubes and data-based report, which are derived from different report generating applications.

- 20 11) The database application programming interface of claim 7, wherein the definition of a drill-through path includes metadata.

12) A drill-through path administration method for use in a framework having a plurality of sources and targets, the sources and targets having potential drill-through paths, the method comprising steps of:

- a) displaying the potential drill-through sources and targets;
- b) accepting from a tool user those sources and targets for which a drill-through path is required; and

c) for each source for which a drill-through path is required;

i) importing the source;

ii) optionally determining automatically the possible drill-through paths for the required sources and targets;

5      iii) permitting the tool user to select one or more drill-through paths;

iv) allowing the tool user to edit the selected drill-through paths to select appropriate parameters;

v) allowing the tool user to edit the selected drill-through paths to add parameter mapping functions; and

10      vi) encapsulating the selected drill-through paths in a program library.

13) The drill-through path administration method of claim 12 wherein the step of accepting from the tool user those sources and targets for which a drill-through path is required uses a graphical user interface whereon the user draws lines connecting nodes representing the sources and targets for the drill-through path.  
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14) The drill-through path administration method of claim 12, wherein the step of optionally determining automatically the possible drill-through paths for the required sources and targets comprises the steps of:

a) comparing the source and target parameter names;

20      b) if the source and target parameter names match then establishing a mapping between the source and target parameters; and

c) if the source and target parameter names do not match then perform the steps of:

25      i) searching for other information regarding the parameters which matches and establishing a preliminary mapping between those sources and targets;

- ii) presenting the tool user with a list of preliminary mappings from which to make a selection; and
- iii) adding the selected preliminary mappings to the list of mappings established by matching parameter names.

5    15)    The drill-through path administration method of claim 12, wherein the program library is an entity selected from the group consisting of dynamically shared library, and plug-in.

10    16)    The drill-through path administration method of claim 12, wherein the source comprises one or more databases or applications provided by a third party.

17)    A computer-based drill-through path administration tool for use by a tool user within a computer-based business modeling tool with a framework composed of source and targets having potential drill-through paths, the drill-through path administration tool consisting of:

15            (a) means for displaying the potential drill-through path sources and targets;

(b) means for accepting from the tool user those sources and targets for which a drill-through path is required;

20            (c) means for importing the source for each source for which a drill-through path is required;

(d) optional means for determining automatically the possible drill-through paths for the required sources and their targets;

(e) means for permitting the tool user to select one or more drill-through paths;

25            (f) means for editing the selected drill-through paths to allow the tool user to select appropriate parameters;

(g) optional means for allowing the tool user to edit the selected drill-through paths to add parameter mapping functions; and

(h) means for encapsulating the drill-through paths in a program library.

- 5 18) The drill-through path administration tool of claim 17, wherein the means for accepting from the tool user those sources and targets for which a drill-through path is required uses a graphical user interface whereon the tool user draws lines connecting nodes representing the sources and targets for the drill-through path.
- 10 19) The drill-through path administration tool of claim 17, wherein the means for optionally determining automatically the possible drill-through paths for the required sources and targets consists of:
- a) means for comparing the source and target parameter names;
  - b) if the source and target parameter names match then providing means for establishing a mapping between the matching source and target parameters; and
  - 15 c) means for searching for information for non-matching source and target parameter names regarding other parameters which match and establishing one or more preliminary mappings between the non-matching sources and targets;
  - 20 d) means for presenting the tool user with the one or more preliminary mappings between the non-matching sources and targets from which to make a selection; and
  - e) means for adding the selected preliminary mappings to the list of mappings established by matching parameter names.
- 25 20) The drill-through path administration tool of claim 17, wherein the program library is an entity selected from the group consisting of dynamically shared library and plug-in.

- 21) The drill-through path administration tool of claim 17, wherein the source comprises one or more databases or applications provided by a third party.